

**Set Name Query**

side by side

*DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; THES=ASSIGNEE;  
PLUR=YES; OP=AND*

**Hit Count Set Name**

result set

<u>L13</u>	L9 not L10	3	<u>L13</u>
<u>L12</u>	L10 not L11	3	<u>L12</u>
<u>L11</u>	L10 and (silica or (silicon adj dioxide))	7	<u>L11</u>
<u>L10</u>	L9 and (isopropanol and SDS)	10	<u>L10</u>
<u>L9</u>	L7 and (potassium adj acetate)	13	<u>L9</u>
<u>L8</u>	L6 and (endotoxin adj reduction)	3	<u>L8</u>
<u>L7</u>	L6 and (endotoxin adj (free or poor))	229	<u>L7</u>
<u>L6</u>	L4 or L5	4110	<u>L6</u>
<u>L5</u>	L3 not L4	1940	<u>L5</u>
<u>L4</u>	L2 and (LPS)	2170	<u>L4</u>
<u>L3</u>	L2 and (endotoxin)	2748	<u>L3</u>
<u>L2</u>	(purification or isolation) same (DNA or (nucleic adj acid) or plasmid or oligonucleotide)	34581	<u>L2</u>
<u>L1</u>	Grimm-stefan.in.	12	<u>L1</u>

END OF SEARCH HISTORY

, ISSN 0003-2697 Jour Code: 0370535  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

... on a small or large scale of highly purified plasmid DNA from Escherichia coli. The procedure consists of five steps: (1) cell lysis by NaOH-\*SDS\*, (2) precipitation of cell lysate with 2 M \*potassium\* \*acetate\* -1 M acetic acid, (3) precipitation of the resulting supernatant with \*isopropanol\* , (4) treatment of the precipitate with RNase, and (5) a second \*isopropanol\* precipitation. The new procedure yields a plasmid DNA that is more than 90% in the supercoiled form and virtually free from proteins, RNA, and chromosomal...

Descriptors: \*DNA\*, Bacterial--\*isolation\* and \*purification\*--IP;  
\*Escherichia coli--chemistry--CH; \*Plasmids--genetics--GE  
?ds

Set	Items	Description
S1	79582	(PURIFICATION OR ISOLATION OR ISOLATING) (S) (DNA OR PLASMID)
S2	258	S1 (S) (ENDOTOXIN OR LPS OR LIPOPOLYSACCHARIDE)
S3	0	S2 AND (POTASSIUM (W) ACETATE)
S4	7	S2 AND (ENDOTOXIN (W) (FREE OR POOR))
S5	4	RD (unique items)
S6	3	S2 AND ((ENDOTOXIN (W) REDUCTION) OR (LESS (W) LIPOPOLYSACCHARIDES))
S7	1	RD (unique items)
S8	3	S2 AND (REDUCED (W) LIPOPOLYSACCHARIDE)
S9	1	RD (unique items)
S10	0	S2 AND (ISOPROPANOL AND SILICA)
S11	0	S2 AND (SILICON (W) DIOXIDE)
S12	37	S1 AND (POTASSIUM (W) ACETATE)
S13	7	S12 AND (ISOPROPANOL AND SDS)
S14	0	S13 AND (SILICA OR SILICON)
S15	3	RD S13 (unique items)

?logoff

30jan03 16:49:21 User259876 Session D457.2  
\$3.43 1.072 DialUnits File155  
\$1.47 7 Type(s) in Format 3  
\$1.47 7 Types  
\$4.90 Estimated cost File155  
\$4.71 0.842 DialUnits File5  
\$3.50 2 Type(s) in Format 3  
\$3.50 2 Types  
\$8.21 Estimated cost File5  
\$9.48 1.053 DialUnits File73  
\$9.48 Estimated cost File73  
OneSearch, 3 files, 2.967 DialUnits FileOS  
\$2.60 TELNET  
\$25.19 Estimated cost this search  
\$25.58 Estimated total session cost 3.067 DialUnits

### Status: Signed Off. (13 minutes)

### Status: Path 1 of [Dialog Information Services via Modem]

### Status: Initializing TCP/IP using (UseTelnetProto 1 ServiceID pto-dialog)  
Trying 31060000009999...Open

DIALOG INFORMATION SERVICES

PLEASE LOGON:

\*\*\*\*\* HHHHHHHH SSSSSSSS?

### Status: Signing onto Dialog

\*\*\*\*\*

ENTER PASSWORD:

\*\*\*\*\* HHHHHHHH SSSSSSSS? \*\*\*\*\*

Welcome to DIALOG

### Status: Connected

Dialog level 02.12.40D

Last logoff: 29jan03 15:33:37

Logon file001 30jan03 16:37:14

\*\*\* ANNOUNCEMENT \*\*\*

\*\*\*

--File 515 D&B Dun's Electronic Business Directory is now online  
completely updated and redesigned. For details, see HELP NEWS 515.

\*\*\*

--File 990 - NewsRoom now contains October 2002 to present records.  
File 993 - NewsRoom archive contains 2002 records from January 2002-  
September 2002. To search all 2002 records, BEGIN 990,993 or B NEWS2002

\*\*\*

--Alerts have been enhanced to allow a single Alert profile to be  
stored and run against multiple files. Duplicate removal is available  
across files and for up to 12 months. The Alert may be run according  
to the file's update frequency or according to a custom  
calendar-based schedule. There are no additional prices for these  
enhanced features. See HELP ALERT for more information.

\*\*\*

--U.S. Patents Fulltext (File 654) has been redesigned with  
new search and display features. See HELP NEWS 654 for  
information.

\*\*\*

--Connect Time joins DialUnits as pricing options on Dialog.  
See HELP CONNECT for information.

\*\*\*

--CLAIMS/US Patents (Files 340,341, 942) have been enhanced  
with both application and grant publication level in a  
single record. See HELP NEWS 340 for information.

\*\*\*

--SourceOne patents are now delivered to your email inbox  
as PDF replacing TIFF delivery. See HELP SOURCE1 for more  
information.

\*\*\*

--Important news for public and academic  
libraries. See HELP LIBRARY for more information.

\*\*\*

--Important Notice to Freelance Authors--  
See HELP FREELANCE for more information

\*\*\*

For information about the access to file 43 please see Help News43.

\*\*\*

NEW FILES RELEASED

\*\*\*Dialog NewsRoom - Current 3-4 months (File 990)

\*\*\*Dialog NewsRoom - 2002 Archive (File 993)

\*\*\*Dialog NewsRoom - 2001 Archive (File 994)

\*\*\*Dialog NewsRoom - 2000 Archive (File 995)

\*\*\*TRADEMARKSCAN-Finland (File 679)

\*\*\*TRADEMARKSCAN-Norway le 678)  
\*\*\*TRADEMARKSCAN-Sweden (File 675)  
\*\*\*

UPDATING RESUMED

\*\*\*Delphes European Business (File 481)  
\*\*\*

RELOADED

\*\*\*D&B Dun's Electronic Business Directory (File 515)  
\*\*\*U.S. Patents Fulltext 1976-current (File 654)  
\*\*\*Population Demographics (File 581)  
\*\*\*Kompass Western Europe (File 590)  
\*\*\*D&B - Dun's Market Identifiers (File 516)

REMOVED

\*\*\*Chicago Tribune (File 632)  
\*\*\*Fort Lauderdale Sun Sentinel (File 497)  
\*\*\*The Orlando Sentinel (File 705)  
\*\*\*Newport News Daily Press (File 747)  
\*\*\*U.S. Patents Fulltext 1980-1989 (File 653)  
\*\*\*Washington Post (File 146)  
\*\*\*Books in Print (File 470)  
\*\*\*Court Filings (File 793)  
\*\*\*Publishers, Distributors & Wholesalers of the U.S. (File 450)  
\*\*\*State Tax Today (File 791)  
\*\*\*Tax Notes Today (File 790)  
\*\*\*Worldwide Tax Daily (File 792)

\*\*\*New document supplier\*\*\*

IMED has been changed to INFOTRIE (see HELP OINFOTRI)

>>> Enter BEGIN HOMEBASE for Dialog Announcements <<<  
>>> of new databases, price changes, etc. <<<  
\*\*\*\*

KWIC is set to 50.

HILIGHT set on as '\*'

\* \* New CURRENT Year ranges installed \*\*

File 1:ERIC 1966-2003/Jan 22  
(c) format only 2003 The Dialog Corporation

Set	Items	Description
-----	-------	-------------

---	-----	-----
-----	-------	-------

Cost is in DialUnits

?b 155, 5, 73

30jan03 16:37:26 User259876 Session D457.1

\$0.35	0.100 DialUnits	File1
--------	-----------------	-------

\$0.35	Estimated cost	File1
--------	----------------	-------

\$0.04	TELNET	
--------	--------	--

\$0.39	Estimated cost	this search
--------	----------------	-------------

\$0.39	Estimated total session cost	0.100 DialUnits
--------	------------------------------	-----------------

SYSTEM:OS - DIALOG OneSearch

File 155:MEDLINE(R) 1966-2003/Jan W4

**\*File 155: Updating of completed records has resumed. See Help News155.**

Alert feature enhanced with customized scheduling. See HELP ALERT.

File 5:Biosis Previews(R) 1969-2003/Jan W4

(c) 2003 BIOSIS

**\*File 5: Alert feature enhanced for multiple files, duplicates removal, customized scheduling. See HELP ALERT.**

File 73:EMBASE 1974-2003/Jan W4

(c) 2003 Elsevier Science B.V.

**\*File 73: Alert feature enhanced for multiple files, duplicates removal, customized scheduling. See HELP ALERT.**

Set	Items	Description
?s	(purification or isolation or isolating) (s)	(DNA or plasmid)
	711263	PURIFICATION
	860799	ISOLATION
	19434	ISOLATING
	1847895	DNA
	171637	PLASMID
S1	79582	(PURIFICATION OR ISOLATION OR ISOLATING) (S) (DNA OR PLASMID)
.?s s1	(s)	(endotoxin or LPS or lipopolysaccharide)
	79582	S1
	64945	ENDOTOXIN
	75480	LPS
	104088	LIPOPOLYSACCHARIDE
S2	258	S1 (S) (ENDOTOXIN OR LPS OR LIPOPOLYSACCHARIDE)
?s s2 and	(potassium (w) acetate)	
	258	S2
	459245	POTASSIUM
	290846	ACETATE
	881	POTASSIUM(W)ACETATE
S3	0	S2 AND (POTASSIUM (W) ACETATE)
?s s2 and	(endothelium (w) (free or poor)	
>>>	Unmatched parentheses	
?s s2 and	(endotoxin (w) (free or poor))	
	258	S2
	64945	ENDOTOXIN
	1109778	FREE
	356698	POOR
	655	ENDOTOXIN(W) (FREE OR POOR)
S4	7	S2 AND (ENDOTOXIN (W) (FREE OR POOR))
?rd		
...	completed examining records	
S5	4	RD (unique items)
?t	s5/3,k/all	

5/3,K/1 (Item 1 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

13332877 21637177 PMID: 11778904

**Production, purification and analysis of an experimental DNA vaccine against rabies.**

Diogo M M; Ribeiro S C; Queiroz J A; Monteiro G A; Tordo N; Perrin P; Prazeres D M

Centro de Engenharia Biologica e Quimica, Instituto Superior Tecnico, Lisboa, Portugal.

journal of gene medicine (England) Nov-Dec 2001, 3 (6) p577-84,

ISSN 1099-498X Journal Code: 9815764

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

**BACKGROUND:** The basic and applied research efforts devoted to the development of \*DNA\* vaccines must be accompanied by manufacturing processes capable of being scaled up and delivering a clinical-grade product. This work describes a rapid process of this kind, based on hydrophobic interaction chromatography (HIC) for the production of milligram quantities of an experimental \*DNA\* rabies vaccine. Its properties and protective activity are tested in comparison with the same \*plasmid\* \*DNA\* purified with a commercial kit. **METHODS:** The experimental \*DNA\* vaccine encoding the rabies virus glycoprotein was amplified in vivo in *Escherichia coli*. The \*plasmid\* was isolated by alkaline lysis, pre-purified and concentrated by isopropanol and (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> precipitation, and purified by HIC and dialysis. Product quality was controlled...

... rabies-virus-neutral ng antibodies and the prot ion against an intracerebral virus challenge were tested in mice. RESULTS: One hundred and forty-two milligrams of the \*plasmid\*, with an HPLC purity greater than 99% were obtained from 4.5 l medium. Control analysis showed that the vaccine conforms to specifications in terms of impurities (endotoxins, genomic \*DNA\* , RNA, proteins). Furthermore, the final experimental vaccine induces rabies-virus-neutralising antibodies and protects mice against a rabies virus challenge. CONCLUSIONS: This study demonstrates that the method developed for the \*purification\* of milligram amounts of \*plasmid\* delivers an \*endotoxin\*-free\*, experimental rabies \*DNA\* vaccine, with protective activity similar to that obtained with the vaccine purified using a commercial kit.

5/3,K/2 (Item 2 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

10906869 20451828 PMID: 10997275

**Reexamination of the effect of endotoxin on cell proliferation and transfection efficiency.**

Butash K A; Natarajan P; Young A; Fox D K  
Life Technologies, Rockville, MD, USA.  
BioTechniques (UNITED STATES) Sep 2000, 29 (3) p610-4, 616, 618-9,  
ISSN 0736-6205 Journal Code: 8306785  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

\*Plasmid\* \*DNA\* purified from bacterial cells can be contaminated with \*endotoxin\* to different extents, depending on the \*purification\* method. Earlier reports indicate that \*endotoxin\* can decrease transfection efficiency in many eukaryotic cell lines; however, the amount of \*endotoxin\* required for inhibition is unclear. We determined \*endotoxin\* effects in several cell lines and observed that \*endotoxin\* levels greater than or equal to 10,000 \*endotoxin\* units (EU) were needed to significantly affect cell proliferation and viability; levels greater than 2000 EU/ $\mu$ g \*DNA\* were required to significantly inhibit transfection for all but one (Huh-7) of the cell lines tested. These \*endotoxin\* levels are significantly higher than \*endotoxin\* contamination in \*plasmid\* \*DNA\* purified by anion exchange, CsCl<sub>2</sub> gradient and \*endotoxin\*-free\* \*purification\* technology, but not as high as a crude alkaline lysis preparatory method. \*Plasmid\* \*DNA\* prepared using anion exchange technology was comparable to \*endotoxin\*-free\* technology in terms of transfection efficiency. Even Huh-7 cells, which are markedly more sensitive to endotoxins, have comparable transfection efficiencies using \*plasmid\* \*DNA\* purified by either of these two methods. We conclude that for those cell lines commonly used for transfection studies, \*endotoxin\*-free\*, quality \*DNA\* is not necessary because significantly higher levels of bacterial endotoxins are required to inhibit either cell proliferation or transfection.

5/3,K/3 (Item 1 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
(c) 2003 BIOSIS. All rts. reserv.

10773191 BIOSIS NO.: 199799394336

**A new method for \*endotoxin\*-free\* \*DNA\*-isolation\* for unambiguous immune-cell transfection results.**

AUTHOR: Weber M; Moeller K; Schorr J  
AUTHOR ADDRESS: QIAGEN GmbH, Max-Volmer-Str. 4, 40724 Hilden\*\*Germany  
JOURNAL: Molecular Biology of the Cell 7 (SUPPL.):p142A 1996  
CONFERENCE/MEETING: Annual Meeting of the 6th International Congress on Cell Biology and the 36th American Society for Cell Biology San Francisco, California, USA December 7-11, 1996

ISSN: 1059-1524  
RECORD TYPE: Citation  
LANGUAGE: English

**A new method for \*endotoxin\*-\*free\* \*DNA\*-\*isolation\* for unambiguous  
immune-cell transfection results.**

5/3,K/4 (Item 2 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2003 BIOSIS. All rts. reserv.

09838958 BIOSIS NO.: 199598293876

**Large scale \*purification\* of \*endotoxin\*-\*free\* \*plasmid\* \*DNA\* for gene  
therapy research.**

AUTHOR: Schorr J(a); Welzek M(a); Seddon T; Moritz P(a)  
AUTHOR ADDRESS: (a)QIAGEN GmbH, Max-Volmer-Strasse 4, D-40724 Hilden\*\*  
Germany

JOURNAL: Journal of Cellular Biochemistry Supplement 0 (21A):p399 1995

CONFERENCE/MEETING: Keystone Symposium on Gene Therapy and Molecular  
Medicine Steamboat Springs, Colorado, USA March 26-April 1, 1995

ISSN: 0733-1959

RECORD TYPE: Citation

LANGUAGE: English

**Large scale \*purification\* of \*endotoxin\*-\*free\* \*plasmid\* \*DNA\* for gene  
therapy research.**

?ds

Set	Items	Description
S1	79582	(PURIFICATION OR ISOLATION OR ISOLATING) (S) (DNA OR PLASM- ID)
S2	258	S1 (S) (ENDOTOXIN OR LPS OR LIPOPOLYSACCHARIDE)
S3	0	S2 AND (POTASSIUM (W) ACETATE)
S4	7	S2 AND (ENDOTOXIN (W) (FREE OR POOR))
S5	4	RD (unique items)
?s s2 and ((endotoxin (w) reduction) or (less (w) lipopolysaccharides))		
	258	S2
	64945	ENDOTOXIN
	1072655	REDUCTION
	25	ENDOTOXIN (W) REDUCTION
	1660396	LESS
	38457	LIPOPOLYSACCHARIDES
	6	LESS (W) LIPOPOLYSACCHARIDES
S6	3	S2 AND ((ENDOTOXIN (W) REDUCTION) OR (LESS (W) LIPOPOLYSACCHARIDES))

?rd

...completed examining records

S7 1 RD (unique items)

?t s7/3,k/all

7/3,K/1 (Item 1 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)

10572209 20114039 PMID: 10649779

**High-throughput method for \*isolating\* \*plasmid\* \*DNA\* with reduced  
\*lipopolysaccharide\* content.**

Neudecker F; Grimm S

Max-Planck-Institute for Biochemistry, Martinsried, Germany.

BioTechniques (UNITED STATES) Jan 2000, 28 (1) p107-9, ISSN  
0736-6205 Journal Code: 8306785

Document type: Technical Report

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

**High-throughput meth for \*isolating\* \*plasmid\* \*DNA\* with reduced \*lipopolysaccharide\* content.**

\*Isolating\* \*plasmid\* \*DNA\* from bacteria is a fundamental step in molecular biology. It is often accomplished by an alkaline lysis of bacteria and the subsequent adsorption of nucleic...

... to silica oxide in the presence of chaotropic substances. Here we show that the addition of such chaotropic reagents is not required for the efficient \*DNA\* \*isolation\* with silica oxide. This surprising finding allowed us to purify \*plasmid\* \*DNA\* with significantly \*less\* \*lipopolysaccharides\* (\*LPS\* ), which is otherwise a common bacterial contaminant of silica oxide-isolated \*DNA\* and inhibits subsequent applications. In addition, we have implemented a precipitation step that altogether leads to a reduction of the \*LPS\* content by a factor of 900 relative to published methods. Our novel protocol facilitates an inexpensive high-throughput analysis of pure plasmids in a 96...

?ds

Set	Items	Description
S1	79582	(PURIFICATION OR ISOLATION OR ISOLATING) (S) (DNA OR PLASMID)
S2	258	S1 (S) (ENDOTOXIN OR LPS OR LIPOPOLYSACCHARIDE)
S3	0	S2 AND (POTASSIUM (W) ACETATE)
S4	7	S2 AND (ENDOTOXIN (W) (FREE OR POOR))
S5	4	RD (unique items)
S6	3	S2 AND ((ENDOTOXIN (W) REDUCTION) OR (LESS (W) LIPOPOLYSACCHARIDES))
S7	1	RD (unique items)
?s s2 and (reduced (w) lipopolysaccharide)	258	S2
	1515488	REDUCED
	104088	LIPOPOLYSACCHARIDE
	80	REDUCED(W) LIPOPOLYSACCHARIDE
S8	3	S2 AND (REDUCED (W) LIPOPOLYSACCHARIDE)
?rd		
...completed examining records		
S9	1	RD (unique items)
?t s9/3,k/all		

9/3,K/1 (Item 1 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

10572209 20114039 PMID: 10649779

**High-throughput method for \*isolating\* \*plasmid\* \*DNA\* with \*reduced\* \*lipopolysaccharide\* content.**

Neudecker F; Grimm S

Max-Planck-Institute for Biochemistry, Martinsried, Germany.

BioTechniques (UNITED STATES) Jan 2000, 28 (1) p107-9, ISSN 0736-6205 Journal Code: 8306785

Document type: Technical Report

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

**High-throughput method for \*isolating\* \*plasmid\* \*DNA\* with \*reduced\* \*lipopolysaccharide\* content.**

\*Isolating\* \*plasmid\* \*DNA\* from bacteria is a fundamental step in molecular biology. It is often accomplished by an alkaline lysis of bacteria and the subsequent adsorption of nucleic...

... to silica oxide in the presence of chaotropic substances. Here we show that the addition of such chaotropic reagents is not required for the efficient \*DNA\* \*isolation\* with silica oxide. This surprising finding allowed us to purify \*plasmid\* \*DNA\* with significantly less lipopolysaccharides (\*LPS\* ), which is otherwise a common bacterial contaminant of silica oxide-isolated \*DNA\* and inhibits subsequent



applications. In addition, we have implemented a precipitation step that altogether leads to a reduction of the \*LPS\* content by a factor of 900 relative to published methods. Our novel protocol facilitates an inexpensive high-throughput analysis of pure plasmids in a 96...  
 ?ds

Set	Items	Description
S1	79582	(PURIFICATION OR ISOLATION OR ISOLATING) (S) (DNA OR PLASMID)
S2	258	S1 (S) (ENDOTOXIN OR LPS OR LIPOPOLYSACCHARIDE)
S3	0	S2 AND (POTASSIUM (W) ACETATE)
S4	7	S2 AND (ENDOTOXIN (W) (FREE OR POOR))
S5	4	RD (unique items)
S6	3	S2 AND ((ENDOTOXIN (W) REDUCTION) OR (LESS (W) LIPOPOLYSACCHARIDES))
S7	1	RD (unique items)
S8	3	S2 AND (REDUCED (W) LIPOPOLYSACCHARIDE)
S9	1	RD (unique items)
?s s2 and (isopropanol and silica)		
	258	S2
	5330	ISOPROPANOL
	50482	SILICA
S10	0	S2 AND (ISOPROPANOL AND SILICA)
?s s2 and (silicon (w) dioxide)		
	258	S2
	36953	SILICON
	196917	DIOXIDE
	17062	SILICON(W)DIOXIDE
S11	0	S2 AND (SILICON (W) DIOXIDE)
?s s1 and (potassium (w) acetate)		
	79582	S1
	459245	POTASSIUM
	290846	ACETATE
	881	POTASSIUM(W)ACETATE
S12	37	S1 AND (POTASSIUM (W) ACETATE)
?s s12 and (isopropanol and SDS)		
	37	S12
	5330	ISOPROPANOL
	124743	SDS
S13	7	S12 AND (ISOPROPANOL AND SDS)
?s s13 and (silica or silicon)		
	7	S13
	50482	SILICA
	36953	SILICON
S14	0	S13 AND (SILICA OR SILICON)
?rd s13		
...completed examining records		
S15	3	RD S13 (unique items)
?t s15/3,k/all		

15/3,K/1 (Item 1 from file: 155)  
 DIALOG(R)File 155:MEDLINE(R)

10504393 20044103 PMID: 10579502

Comparison of different methods for the \*isolation\* and \*purification\* of total community \*DNA\* from soil.

Krsek M; Wellington E M

Department of Biological Sciences, University of Warwick, Coventry, UK.

Journal of microbiological methods (NETHERLANDS) Dec 1999, 39 (1) p1-16, ISSN 0167-7012 Journal Code: 8306883

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Comparison of different methods for the \*isolation\* and \*purification\* of

total community \*DNA\* from soil.

The efficiency and reproducibility of \*DNA\* extraction from soil was tested for variations in lytic and \*purification\* treatments and their effect on yield and purity of \*DNA\*. The extraction yield was improved by increasing the concentration of EDTA or monovalent ions in \*isolation\* buffers, by the introduction of mechanical lysis treatments, and by the use of ethanol precipitation in place of PEG precipitation. Purity was improved using buffers...

... No lytic treatment was efficient on its own, the highest purity was achieved using Crombach buffer and a combination of bead-beating with lysozyme and \*SDS\* lysis followed by \*potassium\* \*acetate\* and PEG precipitation, phenol/chloroform \*purification\*, \*isopropanol\* precipitation, and spermine-HCl precipitation. Sonication sheared the \*DNA\* more than bead-beating. Lysozyme and \*SDS\* lysis without any mechanical treatments allowed \*isolation\* of larger fragments (40-90 kb). Denaturing gradient gel electrophoresis analysis of \*DNA\* isolated using a range of lytic treatments revealed alterations in band patterns which might reflect differences in the efficiency of lytic treatments.

Descriptors: \*DNA\*--\*isolation\* and \*purification\*--IP^ \*Soil\* \*; \*Soil\* --analysis--AN; \*Soil Microbiology

15/3,K/2 (Item 2 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

09605492 98012567 PMID: 9351282

**PCR amplification of crude microbial DNA extracted from soil.**

Yeates C; Gillings M R; Davison A D; Altavilla N; Veal D A

Key Centre for Biodiversity and Bioresources, School of Biological Sciences, Macquarie University, Sydney, Australia. cyeates@rna.bio.mq.edu.au

Letters in applied microbiology (ENGLAND) Oct 1997, 25 (4) p303-7,  
ISSN 0266-8254 Journal Code: 8510094

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

A rapid, inexpensive, large-scale \*DNA\* extraction method involving minimal \*purification\* has been developed that is applicable to various soil types. \*DNA\* was extracted from 100 g of soil using direct lysis with glass beads and sodium dodecyl sulphate (\*SDS\*) followed by polyethylene glycol precipitation, \*potassium\* \*acetate\* precipitation, phenol extraction and \*isopropanol\* precipitation. The crude extract could be used in PCR directed at high-copy number (bacterial small subunit rRNA) and single-copy (fungal beta-tubulin) genes.

Descriptors: \*DNA\*--genetics--GE; \*\*DNA\*--\*isolation\* and \*purification\* --IP^ \*Polym\*; \*Polymerase Chain Reaction\*--methods--MT; \*Soil Microbiology\* ; Base Sequence; DNA Primers--genetics--GE; \*DNA\*, Bacterial--genetics--GE; \*DNA\*, Bacterial--\*isolation\* and \*purification\*--IP; \*DNA\*, Fungal --genetics--GE; \*DNA\*, Fungal--\*isolation\* and \*purification\*--IP; \*DNA\*, Ribosomal--genetics--GE; \*DNA\*, Ribosomal--\*isolation\* and \*purification\* --IP; Evaluation Studies; Genes, Fungal; RNA, Bacterial--genetics--GE; RNA, Ribosomal, 16S--genetics--GE; Tubulin--genetics--GE

15/3,K/3 (Item 3 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)

07893147 94027930 PMID: 8214582

**A modified alkaline lysis method for the preparation of highly purified plasmid DNA from Escherichia coli.**

Feliciello I; Chinali G

CEINGE, Dipartimento di Biochimica e Biotecnologie Mediche, IIa Facolta di Medicina e Chirurgia, Universita di Napoli, Italy.

Analytical biochemistry (UNITED STATES) Aug 1 1993, 212 (2) p394-401